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## FOOD DISPENSING CYCLE AND MEANS

#### TECHNICAL FIELD

This invention relates to a food dispensing cycle and means for undertaking it.

## BACKGROUND ART

The dispensing of food in large organisations frequently involves the preparation of food at a first location followed by its being moved and then dispensed at a second location. At the first location the food is prepared and then divided into individual portions on a utensil, such as a plate or bowl, which will be presented to an individual consumer at the second location. Given the prepared utensil is loaded with food at the first location there arise the need to ensure that the food is kept at a storage temperature where deterioration will be minimised or eliminated until a regeneration step is undertaken to ensure that the consumer receives the food on its utensil without having been contaminated in some way, in a good and visually attractive condition and at the correct temperature. To meet this requirement it is commonly the practice to make use of mobile trolleys at the second location into which trays of prepared food from the first location are placed and a regenerative cycle is then undertaken either by way of heating/cooling means in the trolley or to which the trolley can be linked.

GB Patent 1527 119 shows a mobile container having an insulated outer case which is insulated and divided into compartments each containing a set of tray supports in the form of upper and lower flanges each side and at the back. Each tray has locations for holding in the supports and several apertures along the sides. These hold bowls provided with covers for the hot food. Underneath each row of apertures is a heating element on which the bowls sit raised above the tray surface but retained by raised portions on tray and bowls. The compartment is otherwise refrigerated the remainder of the tray area being taken up by cold food. This arrangement requires special trays and heaters and does not readily lend itself to food regeneration processes. It also does not provide readily for a change in the area of the tray subject to heating as distinct from cooling or for maintenance at a temperature approximating to ambient temperature in the region of the trolley.

## DISCLOSURE OF INVENTION

According to a first aspect of the present invention there is provided a method of dispensing food whereby wherein food prepared at a first location is transported to a second location for dispensing in a working cycle characterised by

- 1 apportioning the food onto a plurality of trays at the first location;
  - 2 loading the plurality of trays into a rack to give, in combination, a spaced array of loaded trays the spaced array having predetermined overall dimensions;
  - 3 transporting the spaced array to an intermediate location;
  - 4 placing the spaced array into a containment with an internal volume of sufficient size to receive at least one spaced array;
  - 5 transferring the containment along with its spaced array or arrays to the second location;
  - 6 regenerating food in the spaced array while within the containment;
  - 7 dispensing food from trays in the spaced array;

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8 returning the racks back to the first, or some other, location for re-use.

According to a first preferred version of the first aspect of the present invention the step of regenerating food is undertaken by way of heating and/or cooling means located in the containment.

According to a second preferred version of the first aspect of the present invention the step of regenerating food is undertaken by way of heating and/or cooling means demountably coupled to the containment.

According to a third preferred version of the first aspect of the present invention or any preceding preferred version thereof the containment is mobile.

According to a second aspect of the present invention there is provided apparatus for dispensing food comprising a containment adapted to receive at least one removable rack, the rack being adapted to contain at least two removable tray for food for regeneration.

## BRIEF DESCRIPTION OF DRAWINGS

An exemplary embodiment of the invention will now be described with reference to the accompanying drawings which show a method of dispensing food and equipment therefore of which:

FIG. 1 is a perspective view of a trolley.

FIG. 2 is a perspective view of a rack and trays for incorporation in the trolley of FIG. 1; and

FIG. 3 is a block diagram showing the steps involved in the method.

## MODES FOR CARRYING OUT THE INVENTION

FIG. 1 shows a mobile trolley 11 for food regeneration which has an interior volume 12 having dimensions: length L, height H and depth D. The interior volume 12 is accessed through aperture 13 can be closed by doors 14A, 14B. The interior volume 12 is substantially free of an obstructions and is of a size and shape to accommodate two racks described in connection with FIG. 2. The trolley is equipped with castors W to enable it to be readily moved.

FIG. 2 shows a rack 15 is made up of corner posts 16 to 19 linked by pairs of horizontally opposed rail pairs A, A' to F, F'. Mid posts M1, M2 serve to divide the interior parts of the rack into two vertical halves and to support the inner. Each pair of rails serves to accommodate a pair of trays. Typically rails C, C' support trays 20A, 20B. The rail pairs A, A' to F, F' are spaced so as to provide clearance above each tray enabling each tray to hold food for an eventual consumer. The rack 15 is of sufficient strength and rigidity to support without distortion a full complement of tray pairs each tray being loaded with foodstuff so that the rack and trays (along with their contents) constitute a racked array. The outside dimensions of the array: width X, height Y and depth Z are slightly smaller than the interior dimensions L, H, D of the trolley so that two loaded racks are a snug fit within the interior volume 12 of the trolley 11 so that the rack 15 is prevented from excessive movement relative to the trolley 11.

The trolley 11 has an end section 21 which contains an electrically powered heater and fan to enable air at a predetermined temperature to circulate within the interior volume 12, or a part thereof as defined by baffles within the trolley or located on each tray. This enables food on each tray, or a particular part of each tray, to be warmed in accordance with a predetermined program established by